

REMARKS / ARGUMENTS

The status of the claims is as follows:

Claims 1-6 are canceled.

Claims 7 and 10 are amended.

Claims 7 - 11 are currently in the case.

Claim 4 was rejected under 35 USC §112. Claim 4 is canceled in this response.

Claims 1-3 and 5 were rejected under 35 USC § 102(b) as being anticipated by Kohler et al. Claims 1-3 and 5 are canceled in this response. However, it is believed that the Kohler et al reference cited by the Examiner fails to support any rejection of claims in the case. Kohler et al describes a fuel injection pump that has an on-off electrically actuated valve to control when a bypass is fully opened or closed. Kohler et al does not describe a power steering pump as claimed by Applicants, nor does it suggest a valve that can be controlled electrically to vary the opening for a bypass.

Claims 1-3 and 5 were rejected under 35 USC § 102(b) as being anticipated by Nakayoshi. Claims 1-3 and 5 are canceled in this response. However, it is believed that the Nakayoshi reference cited by the Examiner fails to support any rejection of claims in the case. Nakayoshi describes a water pump for use in a the cooling system of an automotive vehicle. The pump includes a bypass valve that is both pressure and electrically controlled. However, the control is merely an on-off switching of a valve by moving it axially to either a fully opened and fully closed position. Nakayoshi does not describe a power steering pump as claimed by Applicants, nor does it suggest a valve that can be controlled electrically to vary the opening for a bypass.

Claims 1-11 were rejected under 35 USC § 103 as being unpatentable over Fujimura et al in view of Yokota et al. Since claims 1-6 are canceled in this response, the following arguments are directed to the rejection as it applies to claims 7 – 11.

Claims 7 – 9 are directed to a power steering pump that includes a housing that defines a bore having an axis, an outlet adjacent one end of the bore, a fluid discharge port communicating with the bore at a first axial location and a fluid bypass port communicating with the bore at a second axial location. The pump also includes pumping elements disposed within the housing for pumping fluid to the fluid discharge port and communicating with the bypass port for drawing fluid therefrom. A flow control valve is slideably received in the bore and defines an inlet to the bypass port. A plunger is operatively connected to the flow control valve and is responsive to an applied electromagnetic field to slide the flow control valve to various positions between a fully closed position wherein the flow control valve closes the inlet and a fully open position wherein maximum fluid flows from the bore to the fluid bypass port through the inlet. A spring is operatively coupled to the flow control valve for biasing the flow control valve in the open position and an electromagnetic coil is included for applying an electromagnetic field to the plunger to vary the position of the plunger and thereby vary the size of the inlet and to proportionally control fluid flow to the fluid bypass port.

Claims 10 and 11 are directed to a power steering pump that includes a housing defining a bore having an axis and open end as well as a fluid discharge port communicating with the bore at a first axial location proximate to the open end, and a fluid bypass port communicating with the bore at a second axial location. The pump also includes pumping elements disposed within the housing and adapted for drawing fluid from the fluid bypass port and pumping fluid to the fluid discharge port. A sleeve is received in the bore which has an opening communicating with the fluid bypass port. A flow control valve is slideably received in the bore and has an opening. The flow control valve is slideable to various positions between a fully closed position that closes the opening in the sleeve and a fully open position. The opening in the flow control valve cooperates with the opening in the sleeve to define an inlet to proportionally control fluid flow to the fluid bypass port. In addition, a tubular extension is sealingly mounted onto the housing at the open end and a plunger is disposed within the tubular extension and operatively connected to the flow control valve. The plunger is responsive to an applied electromagnetic field to slide the valve axially to various open positions between the

fully closed position and the fully open position and to vary the position of the flow control valve and thereby vary the size of the inlet. A spring engaging the plunger is included for biasing the flow control valve in the open position and an electromagnetic coil is disposed about the extension. The coil is adapted for applying an electromagnetic field to the plunger and causing it to be responsively positioned.

Neither Fujimura et al nor Yokota et al, individually or in combination, suggest a steering pump with all the elements as set forth in claims 7-11.

For instance, as stated by the examiner: "Fujimura et al does not disclose an electrical means for sliding the flow control valve." In fact, Fujimura et al teaches away from such a device. It discloses a hydraulic pressure reactive flow valve that responds to feedback pressure from the discharge port to regulate the amount of operating fluid that flows back to a reservoir (col 5, lines 1-3). There is no mention or suggestion in Fujimura et al that one should add any electrical control to the valve shown in its many embodiments.

Yokota et al is directed to "...a flow controlling apparatus that does not use a bypass control valve..." (col 3, lines 21-22). In discussing prior art steering pumps with bypass valves, Yokota et al tries to distinguish itself and move away from that technology. That statement, in itself, is reason to disqualify Yokota et al as a supporting reference in the rejection. The Yokota et al, reference leads away from the obvious combination alleged by the examiner, rather than suggesting it.

Yokota et al utilizes an electrically controlled valve to control the pressure at the supply end of a fluid pump to either a minimum or maximum flow rate, depending on predetermined parameters. There is no discussion in Yokota et al of a bypass valve that is axially controlled to various open positions between a fully closed position and the fully opened position and to vary the position of the flow control valve and thereby vary the size of an associated inlet. Therefore, even if one were to modify Fujimura et al, as alleged by the examiner, the result would not include the elements recited in claims 7 - 11.

While the examiner's allegation that it would be obvious for one skilled in the art to modify Fujimura et al by substituting the control valve and actuating means of Yokota et al for the hydraulically actuated bypass valve of Fujimura et al, the question that comes to mind is: What information is contained in either Fujimura et al or Yokota et al that would lead one skilled in the art to make the modification? The examiner has not highlighted such content and appears to be relying on Applicants' claims to develop a hindsight combination of elements to try and support the rejection. Such application of references is not permitted under current practice.

Under MPEP 2143.01 and the cases cited therein¹, the prior art must suggest the desirability of the claimed invention. This means that the teachings of the references, on their own, must be used to evidence the rejection and not reliance on the teachings made by Applicants. In this instance, neither Fujimura et al nor Yokota et al teach or suggest that the hydraulic pressure driven bypass valve described in Fujimura et al is in any way unsuitable or that electrically driven valves are an alternative. In addition, the examiner has failed to show how one skilled in the art would combine the cited references as required by the MPEP and the cases cited below. While Fujimura et al shows a pressure driven valve that is suitable for the stated use, there is no motivation in either of the references to make the combination alleged by the examiner. Additionally since Yokota et al teaches away from using bypass control valves, it can not be seen as suggesting the modification alleged by the examiner. Therefore, the references as combined by the examiner are insufficient to support a rejection under 35 USC (103)(a).

¹ The Federal Circuit continues to provide guidance in these matters as it did in *In re Thrift*, 298 F.3d 1357, 1363 (Fed. Cir. 2002):

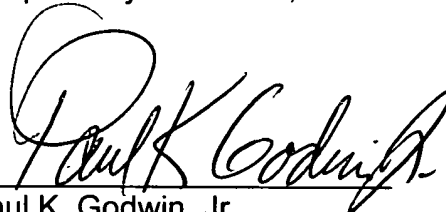
*"To establish a prima facie case of obviousness, the Board must, inter alia, show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." In re Fine, 837 F.2d 1071, 1074, 5 U.S.P.Q.2D (BNA) 1596, 1598 (Fed. Cir. 1988). "The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. [**13] " Kotzab, 217 F.3d at 1370, 55 U.S.P.Q.2D (BNA) at 1317*

The examiner has provisionally rejected claims 1 - 11 on the non-statutory grounds of obviousness-type double patenting over claims 2, 4, 5, 7, 8 and 10-14 of co-pending application 10/631,363. In the event this rejection is finalized, the Assignee of the commonly owned applications intends to file a terminal disclaimer.

All of the other prior art cited by the examiner have been reviewed and it is agreed that they are properly not cited to support rejections of any pending claims

It is believed that the foregoing amendments to the specification and claims of the subject application overcome the examiner's rejections stated in the aforementioned Office Action. In addition, it is believed that the foregoing remarks have rebutted each argument set forth by the examiner in an attempt to advance prosecution and illustrate how the claimed invention is patentable over the prior art of record. Accordingly, the examiner is requested to withdraw his rejections and pass the case to issue.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul K. Godwin, Jr.", written over a horizontal line.

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